

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings thereof.

 Please cancel Claim 3.

Please amend Claims 1 and 5 as in the attached marked-up copy to read as follows:

1. (Previously Amended) A multilayer ultrathin film which comprises layers consisting essentially of polymer layers and layers of lamina particles alternately assembled, said lamina particles being obtained by exfoliating microcrystals of a layered titanium oxide, a film thickness of the layers being controlled within a range of from sub-nm to nm.

2. (Original) The ultrathin film according to Claim 1, wherein the lamina particles are titania nanosheets having a compositional formula of $Ti_{1-\delta} O_2$ ($0 \leq \delta \leq 0.5$).

Claim 3: (Canceled).

4. (Original) The ultrathin film according to Claim 1, which absorbs ultraviolet light having a wavelength of at most 300 nm with a high efficiency.

5. (Previously Amended) A method for producing the titania ultrathin film as defined in Claim 1, which comprises repeatedly soaking a substrate alternately in a sol having titania nanosheets suspended and in a cationic polymer solution so that the nanosheets and the polymer are adsorbed on the substrate each in a thickness of from sub-nm to nm level to form a multilayer having said components alternately accumulated.

6. (Previously Added) The ultrathin film according to Claim 1, wherein the film thickness of the layers is from 0.5 nm to 2 nm.

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7. (Previously Added) The ultrathin film according to Claim 1, wherein the film thickness of the layers is 1 nm.

8. (Previously Added) The ultrathin film according to Claim 2, wherein said titania nanosheets are derived from layered titanium oxide.

9. (Previously Added) The method according to Claim 5, wherein a film thickness of the layers is from 0.5 nm to 2 nm.

10. (Previously Added) The method according to Claim 9, wherein a film thickness of the layers is 1 nm.

11. (Previously Added) The method according to Claim 5, wherein the concentration of the titania is at most 5 wt.%

Claim 12: (Canceled).

13. (Previously Added) The method according to Claim 5, wherein the pH is at least 5.

Claims 14-16: (Cancelled)

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Claim 17. (New) The ultrathin film according to Claim 1, which is in contact with a substrate selected from the group consisting of quartz glass plate, Si wafer, mica plate, graphite plate and alumina plate.

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Claim 18. (New) The ultrathin film according to Claim 1, wherein the layered titanium oxide is selected from the group consisting of lepidocrocite titanate, trititanate, tetratitanate and pentatitanate.

Claim 19. (New) The ultrathin film according to Claim 1, wherein the layered titanium oxide is selected from the group consisting of $\text{Cs}_x\text{Ti}_{2-x}O_4$ wherein $0.5 \leq x \leq 1$; $\text{A}_x\text{Ti}_{2-x}Li_{x/3}O_4$ wherein A = K, Rb or Cs and $0.5 \leq x \leq 1$; $\text{Na}_2\text{Ti}_3O_7$; K_2Ti_4O_9 and $\text{Cs}_2\text{Ti}_5O_{11}$.

Claim 20. (New) The ultrathin film according to Claim 1, wherein the polymer layers comprise one or more polymers selected from the group consisting of polydimethyldiallyl ammonium chloride, polyethyleneimine, and polyallylamine hydrochloride.